**RULES ON THE USE OF RADIOATION SOURCES AND ON ACTIVITIES INVOLVING RADIATION**

**(JV2/SV2)**

**UNOFFICIAL TRANSLATION**

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*Prepared by the Slovenian Nuclear Safety Administration in December 2018.*

*The official text of the Act is located on the pages of* [***the Legal Information System***](http://www.pisrs.si/Pis.web/pregledPredpisa?id=PRAV12882)***.***

 ***WARNING****: The unofficial text of this Act is just an informative work tool, for which the Slovenian Nuclear Safety Administration does not guarantee*

Based on the second paragraph of Article 17, the third paragraph of Article 19, the second paragraph of Article 20, the second paragraph of Article 24, the first paragraph of Article 30, the eighth paragraph of Article 33, the ninth paragraph of Article 170, the sixth paragraph of Article 171 of the Ionising Radiation Protection and Nuclear Safety Act (Official Gazette of the RS, No. 76/17; hereinafter: ZVISJV-1) the Minister of the Environment and Spatial Planning and the Minister of Health are issuing

# RULES

 **on the use of radiation sources and on activities involving radiation**

1. **GENERAL PROVISIONS**

**Article 1**

**(Purpose and content)**

These Rules shall transpose into the legal order of the Republic of Slovenia Council Directive 2013/59/Euratom of 5 December 2013 laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation, and repealing Directives 89/618/Euratom, 90/641/Euratom, 96/29/Euratom, 97/43/Euratom and 2003/122/Euratom (OJ L 13, 17. 1. 2014, p. 1), last amended by Correction of Council Directive 2013/59/Euratom of 5 December 2013 laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation, and repealing Directives 89/618/Euratom, 90/641/Euratom, 96/29/Euratom, 97/43/Euratom and 2003/122/Euratom (OJ L 72, 17. 3. 2016, p. 69) and govern:

* + the content of an application for a notification of intention to carry out a radiation activity and use a radiation source, a licence for carrying out a radiation activity or a registration of a radiation activity, obtaining a permit to use a radiation source or entry of a radiation source in the register of radiation sources, obtaining a licence for clearance of radioactive substances, import or production of general use;
	+ a request for the management of a radiation source;
	+ protective measures for radiation sources;
	+ the format and method of keeping registers of: radiation activities, radiation sources, nuclear, radiation and less important radiation facilities and sealed repositories;
	+ information in registers which is not public; and
	+ inspection of the implementation of protection against ionising radiation.

# Article 2 (Definitions)

The terms used in these Rules shall have the following meaning:

1. **Supplier** means the natural or legal person who supplies or makes available a radiation source.
2. **Exposure** means the taking of images, fluoroscopy, or radiation with a radiation source.
3. **Industrial radiography** means the non-destructive investigative method of objects by using a radionuclide or an X-ray device which produces a radiographic image of the interior of the object.
4. **User of radiation source** means the legal or physical person who, in accordance with the law governing protection against ionising radiation and nuclear safety, obtains a licence for the use of a radiation source or registers a radiation source in the register of radiation sources.
5. **Control point** means the point that divides areas with different levels of radioactive contamination or different levels of radiation.
6. **Beneficial beam of radiation** means the directed beam through a system of shutters, intended for taking images or fluoroscopy of objects or patients, or for treating patients. The cross-section of a beneficial beam is the beneficial field of radiation.
7. **Transfer of a radiation source** means the transfer of a source of radiation from one owner to another.
8. **Producer** means the physical or legal person producing a radiation source.
9. **Storage** means the area where a user stores radioactive substances when not used or radioactive waste until handed to a provider of the mandatory public utility service for the management of radioactive waste.
10. **Disused radiation source** means the radiation source that is no longer used or is not intended to be used for the activity for which a licence was issued but its safe handling is still required.
11. **Container for radiation source** means the assembly of components intended to

retain a radioactive radiation source which is not an integral part of the radiation source and is meant for shielding the radiation source during its transport and handling.

1. **Protective ability** means the thickness of a substance protecting a radiation source and is generally given by an equivalent thickness of lead (Pb) in mm.

# Article 3

**(Notification of intention to carry out a radiation activity and use a radiation source)**

An application for a notification of intention shall contain information showing:

1. the purpose of notification:
2. the name and place of establishment of a legal or natural person intending to carry out the radiation activity or use a radiation source, and their legal representative;
3. information on the owner of a radiation source who is not a user of the radiation source;
4. information on the radiation activity;
5. the location where the radiation source is to be used and stored;
6. properties of the radiation source such as type, activity, maximum power, current, etc.;
7. information on natural radiation sources in cases involving an activity where such sources can be included and if, during the activity, increased exposure of workers or individuals from the population can occur;
8. the start time and anticipated type of duration of the radiation activity or of use of a radiation source, or the time of import, entry from EU Member States (hereinafter: EU), supply, re-sale, lease, export, removal to an EU Member State, clearance, disposal, decommissioning or destruction of the radiation source.

# Article 4

**(Content of an application for acquiring a licence to carry out a radiation activity)**

1. The application for a licence to perform a radiation activity shall contain at least the following information:
	1. the assessment of radiation protection;
	2. the information on the organisational unit or the person responsible for radiation protection:
		* a list of workers in the organisational unit responsible for radiation protection, with evidence of the education and qualifications of workers in this unit as required by the regulation governing the obligations of a provider of a radiation activity and of a holder of a radiation source;
		* a presentation on the structure of the organisation, showing the position of the organisational unit responsible for radiation protection;
		* a decision on appointing a person responsible for radiation protection, listing that person’s authorisations;
		* evidence of the education and qualifications of the person responsible for radiation protection, as required by the regulation governing the obligations of a provider of a radiation activity or a holder of ionising radiation source;
	3. protective measures against radiation regarding the type of radiation source used, demonstrating at a minimum:
* a list of occupationally exposed workers, with records on compliance with the requirements regarding required education and professional qualifications, and medical ability to work with radiation sources or in a radiation area. Where high activity radiation sources are used, the responsibilities of individual workers must also be listed;
* a list of providers of radiological procedures, with records on their compliance with requirements regarding required education and professional qualifications;
* records on including people performing a radiation activity in the personal dosimetry system or records showing that dosimetry of a work environment is assured, as required by a radiation protection assessment under point a of this paragraph;
* a safety plan for radioactive substances that are transported and that are classified as hazardous goods with a potential for severe consequences according to regulations on the transport of hazardous goods;
	1. a description of protective measures if involving a high-activity radiation source, a hazardous radiation source or nuclear substances with activities or in quantities that do not require physical protection in accordance with the regulation governing radiation activity.
1. If several organisations carry out similar radiation activity, with very low or negligible risks, and use comparable radiation sources where the scope and the method of work and the area used do not have a significant effect on radiation protection measures, the assessment of radiation protection under point a of paragraph 1 of this Article shall include the generic assessment of radiation protection for such radiation activity or radiation sources.
2. If a high-activity radiation source is used, the application for issuing a licence for the performance of that radiation activity shall contain proof that the user will have secured funding for the safe management of the source when it is disused in situations where the user terminates its operations or becomes insolvent.
3. If a natural or legal person has not preliminarily notified their intention, the application for issuing a licence for carrying out radiation activity shall also contain the information under Article [3](#_bookmark0) of these Rules.

# Article 5

**(Content of an application for registering a radiation activity)**

1. An application for registering a radiation activity shall, in addition to information required for notification of an intention to carry out a radiation activity under Article [3](#_bookmark0) of these Rules, also contain an assessment of radiation protection that can be made generically for several organisations carrying out the same type of radiation activity or using the same radiation sources, and information on the person responsible for radiation protection.
2. The generation of generic assessments referred to in the preceding paragraph may be ordered by a competent authority, an operator carrying out radiation activity or a supplier of radiation sources.

# Article 6

**(Content of an application for acquiring a licence to use a radiation source)**

1. An application for a licence to use a radiation source shall contain at least the following information:
	1. technical information on the radiation source and any container showing at least:
		* the certificate of the producer of the radiation source and of any container or device;
		* a sketch or image of the radiation source or device, its type (open, sealed radiation source, type of radionuclide, X-ray device, etc.), a description of the radiation source, and the type of radiation activity enabling the use of a radiation source;
		* the recommended period of use of the radiation source;
		* the anticipated start and end of use of the radiation source;
		* the initial activity and the start date of the activity for the radioactive radiation source, and the highest power and strength of the current for an X-ray device or the energy of radiation for an X-ray device or for an accelerator;
		* the number or the code of the radiation source determined by the producer of the radiation source;
		* restrictions and safety measures determined by the producer; and
		* a leak test when needed and its frequency when required by the producer of a sealed radiation source;
		* the location and description of premises where the radiation source is used and stored, including the name of the town, street, facility or the building code. If several radiation sources are used in the same facility, the place where the radiation source is found must be stated in detail;
	2. a report on the inspection and measurements of the radiation source under Article [53](#_bookmark13) of these Rules or a report on monitored and controlled areas under rules governing the obligations of a provider of radiation activity and a holder of an ionising radiation source;
	3. anticipated management of radioactive radiation sources after their disuse;
	4. protective measures against radiation regarding the use and maintenance of the radiation source, demonstrating at minimum:
		* the frequency of maintenance (service works) on the radiation source or device containing the radiation source, and who can perform the maintenance works;
		* written instructions for safe working with the radiation source that include a procedure for work with the radiation source (use, storage, records, etc.) and instructions for action in case of an emergency;
		* the method for use of the radiation source with a proposal for operating limitations and conditions.
2. If the applicant cannot deliver technical documentation, a report on inspection and measurements of the radiation source under Article [53](#_bookmark13) of these Rules shall be technical documentation.
3. Notwithstanding the provisions of paragraph 1 of this Article, the applicant need not submit information on the application for a licence to use a radiation source which has already been submitted on the application for a licence to carry out a radiation activity.

# Article 7

**(Content of an application for entry of a radiation source in the register of radiation sources)**

An application for the entry of a radiation source in the register of radiation sources shall contain at least the following information:

* 1. the technical documentation on the radiation source and any container or device if it is not already included in the application for a licence to carry out a radiation activity, showing at least:
		+ the certificate of the producer of the radiation source and of any container or device;
		+ a sketch or drawing of a radiation source or device;
		+ the number or the code of the radiation source determined by the producer of the radiation source;
	+ the type of radionuclide, its initial activity, the start date of the activity for the radiation source, and the highest voltage and strength of the current for an X-ray device;
	+ information on maintaining the radiation source or device and container;
	1. a report on the inspection and measurements of the radiation source under Article [53](#_bookmark13) of these Rules;
	2. information on the start date and anticipated duration of use of the radiation source;
	3. information on the location at which the radiation source is to be used and stored.

# Article 8

**(Content of an application for a licence for clearance of a radioactive substance)**

The application for a licence for clearance of a radiation source of a radioactive substance shall contain at least the following information:

1. information on the radiation activity from which the radioactive substance is generated and that is the subject of clearance;
2. information on the radioactive substance, including at least:
	* information on the mass, volume and type of substance;
	* a report on measurements of specific activities of radionuclides in the substance and on surface area contamination where needed;
3. evidence of compliance with the criteria for clearance set out in a regulation governing radiation activities;
4. a plan for managing radioactive substance after clearance;
5. when the values of the clearance criteria set out in a regulation governing radiation activities are exceeded, also include the assessment of radiation protection for clearance over a radioactive substance, demonstrating compliance with the clearance criteria according to the law governing ionising radiation protection and nuclear safety and according to a decree governing radiation activities.

# Article 9

**(Content of an application for production or import of objects for general use)**

1. The application for import of objects for general use, whose use constitutes a new type of a radiation activity, shall include the following evidence:
	1. information on the intended use of the product;
	2. technical characteristics of the product;
	3. the method of incorporation of the radioactive substance where its incorporation into the product is anticipated;
	4. information on dose rates at relevant distances when using the product, including dose rates at a distance of 0.1 m from any accessible surface area of the product;
	5. an eligibility assessment for the use of objects for general use that contain a radioactive substance, demonstrating the anticipated dose for regular users of the product and an expert opinion from an authorised provider of radiation protection.

(2) If the production involves products for general use whose anticipated use can constitute a new type of a radiation activity, in addition to evidence under the preceding paragraph of this Article, evidence under Article [4](#_bookmark1) of these Rules will also have to be included.

# Article 10

**(Disuse of a radiation source)**

1. If the user of a radiation source no longer uses the radiation source, it shall, within 15 days, notify the disuse to the competent administrative authority that issued a licence for the use of the radiation source or entered the radiation source in the register of radiation sources.
2. If disuse under the preceding paragraph concerns a radioactive substance, the user of the radiation source shall, within three months, hand over the radiation source to a provider of the mandatory public utility service for the management of radioactive waste, to another holder of a licence to carry out a radiation activity or return the radiation source to the producer or suppler. The user of the radiation source shall, within eight days of the transfer of the radiation source, deliver, to the competent administrative authority that issued the licence for the use of the radiation source or entered the radiation source in the register of radiation sources, a document on handing over the radiation source showing the transfer of the radiation source to another entity.
3. If disuse under paragraph 1 of this Article concerns an X-ray device, the user of the radiation source shall, within six months of its disuse, hand over the device to an authorised expert organisation for the management of hazardous waste or another physical or legal person, return it to the producer or supplier or notify the competent administrative authority of the intention to keep the X-ray device as a reserve. The user of the radiation source shall, within eight days of the transfer of the X-ray device, deliver, to the competent authority that issued a licence for the use of the radiation source or entered the radiation source in the register of radiation sources, a document on handing over the X-ray device or evidence of its destruction.
4. In a case where the user of the radiation source under the preceding paragraph of this Article cannot meet the disuse obligation of the radiation source, this obligation shall be complied with by the holder of the radiation source if different from the user.
5. The provisions of this Article shall apply mutatis mutandis to the disuse of ionising fire detectors or other radioactive radiation sources which are exempt based on the assessment of the radiation protection or according to a regulation governing radiation activities and for which the holder was not required to obtain a licence for carrying out the radiation activity or to register the activity.

# Article 11

**(Ceasing to carry out a radiation activity)**

1. When ceasing to carry out a radiation activity, a user shall hand over any radioactive waste to a provider of the mandatory public utility service for the management of radioactive waste.
2. Where the use of an open radiation source was involved or there is a likelihood that equipment and premises where the radiation activity was carried out are contaminated, the provider of the radiation activity shall ensure that the authorised radiation protection expert takes measurements and determines the rate of contamination.
3. The provider of a radiation activity shall ensure that premises and equipment are decontaminated to such extent that their radioactivity is in accordance with limit values prescribed for surface areas in a living and working environment which are not part of a controlled area according to the Decree on dose limits, radioactive contamination and intervention levels.

# Article 12 (Keeping records)

1. A provider of a radiation activity shall keep documentation and records while performing a radiation activity for three years after its cessation, concerning:
	1. the issue of valid administrative acts for carrying out radiation activities and for the use of radiation sources;
	2. the number and properties of radiation sources;
	3. containers and devices used;
	4. software important for the work with the radiation source and for radiation protection;
	5. the start date of using the radiation source;
	6. the location (address) where the radiation source is used and stored;
	7. handling over radioactive sources to another holder of a licence for carrying out a radiation activity;
	8. handing over a radioactive waste to a provider of the mandatory public utility service for the management of radioactive waste, to another holder of a licence for carrying out a radiation source, or returning it to the producer or suppler;
	9. where an open radiation source is concerned: the type, quantity and activity of radionuclides upon purchase, the location of use, the quantity and activity of radionuclides used for carrying out the radiation activity, the contamination of a working environment or people, the transmission to other people and discharges into the environment;
	10. inspection and measurements of the radiation source under Article [53](#_bookmark13) of these Rules or control measurements in monitored and controlled areas under rules governing the obligations of a provider of a radiation activity and a holder of an ionising radiation source;
	11. procedures on the radiation source, including maintenance of a container or device containing the radiation source;
	12. reports and opinions of an authorised radiation protection expert;
	13. information on the person responsible for radiation protection and evidence of his or her qualifications on radiation protection;
	14. information on workers participating in the performance of the radiation activity, including information on measured doses, training undertaken, verification of qualifications and completed healthcare surveillance in accordance with the assessment on radiation protection.
2. For high-activity radiation sources, the holder shall, in addition to information under the first to sixth indent of the preceding paragraph, keep records on information given on a standardised evidence sheet for radioactive sealed radiation sources in Annex 3 which is a component part of these Rules.
3. A holder of a licence for the use of a high-activity radiation source shall send to the competent administrative authority an electronic or written copy of all records required under the preceding paragraph:
	* immediately after acquiring a high-activity radiation source;
	* every 12 months;
	* immediately after information changes;
	* immediately after transferring a high-activity radiation source to another holder of a licence, including the name of the new holder;
	* immediately after the holder of the licence is no longer in possession of any radiation source; and
	* upon a request of the competent administrative authority.
4. A user of an ionising fire detector shall keep documentation and records, showing at minimum:
	* the location (place) and the number of ionising fire detectors;
	* the radionuclide and its activity;
	* date of installation;
	* information on inspections and measurements of the radiation source under Article [53](#_bookmark13) of these Rules, conducted by an authorised radiation protection expert;

- information on maintenance and by whom.

# Article 13

**(Warning markings for radiation hazard)**

1. The basic symbol used to warn of radiation hazard or substances is a cloverleaf, with proportions towards the central circle as shown in Annex 1 which is a component part of these Rules.
2. The marking warning of radiation hazard is black on a yellow background as shown in Annex 1 to these Rules.
3. The marking warning of radiation hazard containing the writing ‘RADIOACTIVE’ shall be fitted on all sealed and open radiation sources or their containers. The size of letters must be the same as the diameter of the central circle of the basic symbol. If the radiation source is too small or for another reason cannot be fitted with the marking as described, it shall be marked with a pin or a sticker in the dimensions possible in the circumstances.
4. If the marking warning of radiation hazard concerns emission by a device or increased level of radiation is expected in a particular area, the marking warning of radiation hazard with words ‘CAUTION, RADIATION’ shall be fitted in a visible place on the device or in the area. The size of letters must be the same as the diameter of the central circle of the basic symbol.
5. The warning marking of radiation hazard may not be used for other purposes such as for marking radiation substances or areas with increased level of radiation and shall be removed when no longer needed for this marking.
6. A provider of a radiation activity or a user of a radiation source shall ensure that warning markings for radiation hazard are installed, visible and legible.
7. A provider of a radiation activity who is a foreign legal entity may use markings under paragraphs 3 and 4 of this Article in their own language and ensure that the words ‘CAUTION, RADIATION’ are fitted.
8. Hazardous radiation sources of category 1 to 3 under the regulation governing radiation activities shall have a marking in the internal side of the housing containing the radiation source, in accordance with Annex 1 of these Rules, which warns of consequences from unauthorised interference with the radiation source. This marking may not be visible during the normal use of the radiation source.

# WORKING WITH RADIATION SOURCES

**Article 14**

**(Requirements for areas where radiation sources are used)**

1. Areas and facilities where radiation sources are used shall be constructed and equipped in the manner to allow the radiation activity to be carried out safely.
2. A radiation source may be used only in facilities or buildings constructed and equipped in a manner such that dose rates on the external surface area of the building or surrounding areas are lower than the values that could cause radiation exposure of an individual from the population to be above limit values for the population.
3. Radiation sources may be used in a living environment if it is ensured that their use does not cause the prescribed limit doses for the population to be exceeded.

# Article 15

**(Storage of radioactive radiation sources)**

1. Portable and movable radiation sources shall be stored, when not in use, in areas constructed and equipped in a manner such that dose rates on the external surface area of the facility or of the area are lower than the values that could cause the prescribed limit doses for the population to be exceeded.
2. The area for storage shall be designed in a manner that effectively prevents the spread of radioactive substances into other areas and organisms, and which allows for each radiation source to be stored and taken out without any hazard.
3. Radioactive substances may not be stored together with other hazardous substances and the storage may not be used for other purposes.
4. The place and the facility for storage shall have the minimum risk of fire or flood.
5. Walls, the ceiling, floor and furniture shall have smooth surface areas and be constructed from materials that can be easily cleaned.
6. If, during the storage of radioactive substances, radioactive gases, vapours or aerosols are released, the storage shall have suitable ventilation and the air pressure in the storage shall be lower than in the surrounding areas.
7. Radioactive substances shall be stored, transferred or moved within the premises of a holder of a licence to carry out a radiation activity in containers or devices which prevent leakage of radioactive substances into the environment and at the same time ensure that doses received by people who transfer or move the radioactive substances are below the prescribed limit doses.
8. Containers or devices in which radioactive substances are stored must be easily opened and closed. For closing containers with vapours and flammable radioactive substances, the producer of the container shall determine special protective measures. Containers for radioactive liquids shall be made of metal or plastic; their volume shall be such that if the container is damaged all the liquid is retained.
9. Individual containers or devices for storing radioactive substances shall have a marking and legible writing, clearly showing the type of radiation source, its activity, the start date of the activity or the date of disposal into storage in a case of disuse of the radioactive substance.
10. The area for storing radioactive substances shall be fitted with a marking warning of radiation hazard under Article [13](#_bookmark3) of these Rules.

# Article 16 (Storage of X-ray devices)

Portable X-ray devices which are not used shall be stored in areas to which access by unauthorised people is prevented.

# Article 17

**(Instructions for safe working with radiation sources and acting in an emergency)**

1. A user of a radiation source shall have instructions for safe working with radiation sources and for acting in an emergency, written in accordance with the assessment of radiation protection and technical documentation for radiation sources. Written instructions shall be in a language that workers understand and contain a description of the course of work and of protective measures, and the use of suitable protective equipment for workers working with the radiation source. The instructions shall be available at work posts. Workers shall act in accordance with these instructions.
2. For high-activity radiation sources written instructions under paragraph 1 of these Rules shall also contain measures to prevent unauthorised access to the radiation source, the loss of the radiation source, its theft or damage by fire, and practical exercises in period not longer than 12 months during which actions to be taken in an emergency are tested.
3. Practical exercises under the preceding paragraph shall be simulated, without the use of a radiation source.
4. If the assessment of radiation protection shows the use of a stationary or transmission radiation measuring device is necessary, the written instructions shall also contain the method for taking measurements, the frequency of calibrating the measuring devices and action to be taken when detecting increased radiation.
5. Written instructions under paragraphs 1 and 2 of this Article shall list organisations or services to be informed and consulted in the case of an emergency. Written instructions shall be regularly checked and brought in line with the actual situation and good practices in the field of safe work with radiation sources.

# Article 18

**(Dose rates near devices with sealed radiation sources)**

1. Dose rates of non-beneficial radiation on the external surface areas of stationary devices with a sealed radiation source shall not exceed 1 mGy/h or 30 µGy/h at a distance of 1 m.
2. When the device with a sealed radiation source is being transferred or moved, the dose rate on its surface area may not exceed 0.5 mGy/h or 15 µGy/h at a distance of 1 m.
3. Notwithstanding the provisions of paragraph 2 of this Article, restrictions for devices with sealed sources used in industrial radiography are given in Article [40](#_bookmark5) of these Rules.

# Article 19 (Warnings and markings)

1. Devices with a radioactive source shall be marked with markings warning of radiation hazards, under Article [13](#_bookmark3) of these Rules.
2. If a device with a sealed radiation source or an X-ray device is being operated, it shall be necessary to warn of the radiation hazard by sound and light alarm devices, if prescribed by the restrictive and protection measures of the producer of the device or by the assessment of radiation protection.
3. Where relevant, important information on radiation sources shall be fitted in visible places in the vicinity of the radiation source, containing at minimum information as to the type and activity of the radionuclide or the maximum power, current, name, address and telephone number of the person responsible for radiation protection, the number, date of issue and validity of the licence for the use of the radiation source or of the entry of the radiation source in the register of radiation sources.
4. A producer of a radiation source shall fit each high-activity radiation source with a unique product code. In the case of an unmarked, imported or entered high-activity radiation source, the marking shall be provided by a supplier. This marking shall be engraved or embossed by a seal onto the radiation source as well as on the container of the high-activity radiation source. Where this is not possible or for containers intended for multiple use, the container of the radiation source shall be fitted at least with information on the properties of the radiation source.
5. A holder of a licence for the use of a high-activity radiation source shall ensure that each high-activity radiation source is accompanied by written documentation demonstrating that the radiation source is marked in accordance with paragraph 4 of this Article and that these markings or writing plates remain legible. The documentation shall also contain a photograph of the radiation source, of the container of the radiation source, the transport packaging and the device or equipment which can be the same for every container construction type for a high-activity radiation source and for typical containers for a high-activity radiation source. A producer or supplier shall deliver this photograph to its holder.

# Article 20

**(Measures for reducing exposure)**

1. If devices with sealed radiation sources or X-ray devices are used outside specially designated areas, the beneficial beam of radiation shall be directed towards the object investigated, preventing entry into the beam.
2. If the device with a sealed radiation source has protective shutters, these shall be closed and the device locked when not in use.
3. A device with a sealed radiation source or X-ray device shall have a build-in switch which allows operators to immediately terminate a beneficial beam of radiation.
4. Where the requirements under the preceding paragraph cannot be met, X-ray devices and devices using radiation sources of categories 1, 2 or 3 shall be used in areas with an entry through a protective door or labyrinth. The door to such an area shall have a mechanism stopping the beneficial beam of radiation when entry is attempted.

# Article 21

**(Leaking test for sealed radiation sources)**

1. Testing for leaks of radiation sources needs to be conducted for sealed radiation sources where there is a suspicion that the radiation source is damaged, at intervals set out in Article [53](#_bookmark13) of these Rules or within time limits set out in the technical documentation for the radiation source. The test is conducted on accessible surface areas of a container in accordance with valid international standards.
2. If the activity on the swab taken is less than 200 Bq it is considered that the radiation source is adequately sealed. If the activity is greater than 200 Bq, the use of the radiation source must immediately cease and measures for remedying contamination and procedures for replacing the radiation source must be implemented.
3. For sealed radiation sources containing radionuclides in gaseous state Kr-95, H-3 or similar, the leaking test is not necessary.
4. Notwithstanding the provisions of paragraph 1 of this Article, the leaking test on a sealed radiation source is unnecessary for ionising fire detectors.

# Article 22

**(Loss of a radiation source and an emergency involving a radiation source)**

1. A user of a radiation source shall in case of any loss, theft or unauthorised use of a radiation source, significant spillage, discharge, release of the radiation source or other emergency such as fire, unintentional exposure to radiation of a worker or an individual from the population, immediately inform the competent administrative authority. In the case of loss or theft, the user shall also inform the police and relate any information that could contribute to finding the radiation source.
2. The user of the radiation source shall check the integrity of the radiation source after the situation referred to in the preceding paragraph, analyse the cause of the event, implement corrective measures and in writing inform the competent administrative authority within 5 working days.
3. The written report under the preceding paragraph shall contain a comprehensive analysis of the event, stating already-implemented corrective measures and the measures by which the user will reduce the possibility of a similar situation reoccurring.
4. The authority competent for nuclear safety shall provide immediate technical advice and assistance to people who are not usually involved in activities that require radiation protection and who suspect they are dealing with a radiation source of unknown origin. The main objective of such advice and assistance is to protect workers and the public from radiation and to protect the radiation source.

# Article 23 (International cooperation)

The competent administrative authority shall immediately exchange information and cooperate with EU Member States, third countries and relevant international organisations in a case of loss, unauthorised removal, theft or the discovery of a high-activity radiation source, other significant radiation source or radioactive substance, and in continued monitoring and investigations consider the requirements of regulations governing information secrecy.

# Article 24 (Ionising fire detectors)

1. Dose rate at a distance of 10 cm from any externally accessible surface area of an ionising fire detector shall not exceed 1 µGy/h.
2. An ionising fire detector shall be constructed in a manner where the radiation source is not accessible and the housing cannot be opened with simple tools and a hand cannot come close to the radiation source where dose rates exceed 10 µGy/h.

# Article 25

# (Dose rates meters)

# For industrial and research activities where workers can enter the beneficiary beam area or where restricted access area needs to be provided, or to verify that the radiation source is in a protective position, it is necessary to ensure the use of dose rate meters and the staff must be trained to handle these meters.

# The selection of meters referred to in the preceding paragraph and the necessary measurements shall be carried out by the holder of the authorization with an authorized radiation protection expert and shall be described in the assessment of radiation protection.

# Article 26

**(X-ray device for inspecting luggage, shipments by post or other objects)**

1. A stationary X-ray device for inspecting luggage, shipments by post or other objects shall have a protective cover preventing access to the field of a beneficial beam while it is operating. An object to be inspected or analysed shall be inside the housing before releasing radiation, or the mechanism for moving samples shall operate automatically.
2. Dose rates outside the surface area of the X-ray device may not exceed values that could cause the prescribed dose rates for the population to be exceeded.
3. An X-ray device shall have in place a technical system to terminate its operation in a case of prohibited interference with the radiation beam during its operation.
4. Entry and exit opening in a protected device, used for inspecting luggage, products and goods shall be equipped with an additional protective element, such as a curtain made of lead rubber strips, to mitigate the leaking of radiation that occurs around the opening.
5. The X-ray device shall have markings warning of radiation hazard under Article [13](#_bookmark3) of these Rules and warning lights signalling when the device is operating.
6. If devices are used in a freely accessible area in which it is possible to access the field of radiation via entry and exit points in the device, free access to such a device shall be prevented.

# Article 27

**(X-ray devices in which the beam is directed out from the device)**

1. An X-ray device in which the radiation beam is directed towards the outside shall have mechanisms for terminating or preventing radiation, to prevent hazardous exposure. If the device has more than one shutter, only one shutter may be open at a time.
2. A protective cover of the X-ray pipe shall ensure that leaking from the housing (dose rate) at any distance of 5 cm from any accessible surface area is not greater than 25 μGy/h. The control panel of the device shall be installed in a manner such that control over the functioning of the X-ray is possible at any time.
3. An open X-ray device shall have a marking showing the direction of radiation and a separate warning if the X-ray tube does not have the additional filtration of a beneficial beam.
4. Portable X-ray devices in which the radiation beam is directed towards the outside shall be equipped with a safety switch, key or code to prevent unintentional use of the device. All safety mechanisms shall be equipped with a safety circuit preventing the use of the device in the wrong conditions.

# OPEN RADIATION SOURCES

**Article 28**

**(Requirements for working with open radiation sources)**

1. A tool for multiple use that is used for work with an open radiation source shall be cleaned after use and kept separately from other tools and instruments, except when the tool is contaminated with short-lived radionuclides only.
2. Workers handling radioactive substances shall use personal protective equipment as determined by the assessment of radiation protection.
3. In a laboratory where work is done with open radiation sources it shall be prohibited to eat, drink, smoke or apply make-up.
4. Work related to handling vapours or dust radioactive substances shall be performed in special fume cupboards or other similar chambers with ventilation.
5. Where possible, automatic equipment shall be used for handling radioactive substances.
6. Radiation sources shall be marked to allow for their easy recognition. Marking shall include at least a radionuclide, its activity, the date of measurement, the volume and specific activity, and the name of the person that took the measurement.

# Article 29 (Radiation measuring devices)

1. In an area where open radiation sources of class I and II are used, devices for measuring contamination and radiation dose rate shall be available, and the staff shall be trained for their use.
2. In an area where open radiation sources of class III are used, devices for measuring contamination shall be available, and the staff shall be trained for their use.
3. Measurements of contamination and radiation dose rate shall be taken at regular intervals and when there is suspicion of contamination.
4. A holder of a licence shall consult with an authorised radiation protection expert on selecting measuring devices under paragraph 1 of this Article and on measurement intervals under the preceding paragraph, both of which shall be described in the assessment of radiation protection.

# Article 30

**(Requirements for premises for class III)**

1. Classes of work with an open radiation source are defined by the regulation governing radiation activities.
2. Floor, furniture and working surface areas where open radiation sources are used shall be constructed from materials that are watertight and resistant to moisture and common chemicals (for example diluted acids, bases or organic solvents).
3. Walls, the ceiling and floor shall have smooth surface areas and be constructed from materials that can be easily cleaned.
4. Working surface areas shall be made from materials to which dust does not bind and that can be easily cleaned.
5. Faucets for water shall allow for opening with an elbow or motion detector.
6. Working surface areas shall be covered with an absorbent base before starting work to prevent the possible spread of contamination.
7. A laboratory shall be equipped with suitable equipment for cleaning any possible contamination.
8. Ventilation shall be installed to prevent air from areas in which an open radiation source is used circulating or entering areas where it is not used. If there are more areas with an open radiation source for different activities the ventilation shall allow air to circulate from areas with lower activity into areas with a higher activity.
9. When designing and using a system for filtering discharged air, the type of work, the radionuclides use, their chemical and physical forms and the chemical and physical forms of possible air pollution need to be considered. Where discharged air must be filtered, the filters shall be installed in a manner such that the radioactive substances that have accumulated in the filter do not constitute a radiation hazard for the environment and the filter can be easily replaced.
10. If current radioactive waste is directly discharged into a sewage system, a separate sink shall be available for this purpose. Pipes for discharges from a laboratory working with open radiation sources shall lead directly to the main sewage pipe.

# Article 31

**(Requirements for premises for class II)**

Aside from requirements for areas for class III under the preceding Article, an area for class II work shall comply with the following additional requirements:

* areas for class II work shall be in a part of a building that is separate from other areas;
* have a mandatory control light with a sanitation knot;
* have sufficient room at the control point to enable workers to change into protective clothing and to take measurements of contaminated people;
* the ground must be covered or painted to prevent any cracks in the ground and installations on a wall must be at a height of at least 10 cm;
* installations must cross walls to prevent the spread of radiation from these areas into neighbouring areas;
* the floor and working benches are sufficiently strong to bear the weight of devices such as lead bricks that protect against radiation;
* window locking devices in the area must be of such a design that they can only be opened with a special key;
* ventilation must be such that there is negative pressure in areas where radioactive substances are handled. Exceptions are areas for nuclear medicine where patients are treated;
* ventilation must have a separate exit, usually through filters;
* cupboards or special chambers where radioactive substances are prepared must be equipped with light markings showing when the ventilation is turned on.

# Article 32

**(Requirements for premises for class I)**

Aside from requirements for areas for class III and II under the preceding Article, an area for class I work shall comply with the following additional requirements:

* areas for class I must be in a special building or a separate part of the building, with a special entrance and a control point;
* areas for class I are divided into more sections, depending on the activity of radioactive substances and the type of work involved;
* to exclude the possibility of introducing radioactive contamination from higher to lower sections, a control point is installed between these sections.

# SPECIAL REQUIREMENTS FOR CARRYING OUT INDUSTRIAL RADIOGRAPHY

**Article 33**

**(Measuring devices and measuring radiation)**

1. A provider of industrial radiography and every radiography team shall have a suitable dose rate measuring device and qualified staff who know now to use it.
2. The correct functioning of a measuring device shall be checked before every inspection of a material.
3. After completing an inspection, a provider of industrial radiography shall turn off the device and check, using the dose rate measuring device, that there is no beneficial beam of radiation.

# Article 34 (Dosimeters)

Workers carrying out industrial radiography shall, in additional to personal dosimeters, wear an electronic alarm dosimeter with a sound alarm, to warn when operating dose rate limits are exceeded. The alarm must be loud enough to be heard in a noisy working environment and be visible.

# Article 35

**(Number of workers required for carrying out industrial radiography)**

1. Industrial radiography shall be carried out by at least two people outside specially dedicated areas who are qualified to carry out industrial radiography. One of those people shall have at least two years’ experience of working in industrial radiography. This rule of two people shall also apply to the transporting of devices with a sealed radiation source and used for industrial radiography.
2. Where several teams carry out industrial radiography in the same area, there must be agreement to ensure safety and mutual recognition of teams and operations.

# Article 36

**(Requirements for X-rate devices in industrial radiography)**

1. A housing of an X-ray machine used for carrying out radiation radiography shall be such that leaking from the housing (dose rate) at a distance of 1 m from the tube is not greater than the values in table 1 in Annex 2 which is a component part of these Rules.
2. The total filtration of a beneficial beam of radiation shall comply with the equivalent thickness set out in table 2 of Annex 2 to these Rules
3. When heating an X-ray device, the shutters shall be closed and the protective strength of the X-ray be such that the values under paragraph 1 of this Article are not exceeded.
4. The control panel of an X-ray device shall have a clearly visible indication that the device is turned on and ready for exposure. In addition, it must have a separate light indication that warns that the device is operating.
5. A button for an emergency stop must be installed on the control panel of the X-ray device.
6. If the X-ray device has protective shutters, these shall be closed and the device locked when not in use.

# Article 37

**(Carrying out industrial radiography in designated areas)**

1. Radiation dose rate on any external wall where industrial radiography is being carried out shall be less than 7,5 μGy/h at the highest permitted parameters of an X-ray device or when a sealed radiation source of the highest permitted activity is used in the device.
2. An area where industrial radiography takes place is a controlled area.
3. Installations shall cross walls to prevent radiation from these areas spreading in to neighbouring areas, leading to the prescribed limits being exceeded.
4. A stationary X-ray device for industrial radiography shall be installed in the manner where the X-ray tube and the table for inspecting material is in one area and the control panel and other parts of the equipment are in the other area.
5. The door to an area where industrial radiography with a stationary X-ray device is conducted must have a switch preventing the operation of the device when the door is open or terminating its operation when the door is opened during its operation.
6. A remote control of a device containing a sealed radiation source shall be in fitted such that the operator of industrial radiography can see the entry to the area where industrial radiography is performed.
7. A measuring device for continually taking measurements of dose rate must be installed in the area where industrial radiography with a sealed radiation source is performed. The radiation measuring device shall be connected to a device that warns workers before they enter the area there is no radiation source in a protected position.
8. Before entering the area after an exposure is taken, the provider shall ensure exposure to radiation is terminated. If radiography is performed with a sealed radiation source, this check must always be done with a radiation measuring device under Article [33](#_bookmark4) of these Rules.
9. Light indicators or sound signals shall be installed at the entry to an area for performing industrial radiation warning of radiation danger for those inspecting material or that the system is in standby mode.
10. The operation of warning devices and safety systems shall be checked each day before industrial radiography starts. If these do not function correctly the work cannot commence before the error is repaired.

# Article 38

**(Performing industrial radiography outside special designated areas)**

1. Before starting industrial radiography outside designated areas, it shall be necessary to establish that:
	* radiographic devices are faultless;
	* providers of industrial radiography have personal dosimeters, alarm dosimeters and devices to measure dose rates;
	* the area for performing industrial radiography is enclosed and marked such that at the boundary of an enclosed area, the dose rate is as low as possible and does not exceed 60 µGy/h averages per minute. This must be checked with a dose rate measuring device. Warning signs, portioning strips and other means of preventing access are used for marking and enclosing.
	* Workers performing industrial radiography monitor the enclosed area and prevent access of others while they inspect materials;
	* individuals near an area where industrial radiography is performed are informed of relevant measures on radiation protection before activities commence;
	* the control panel and the remote control is installed such that workers performing industrial radiography can adequately control the area;
	* one worker stands sufficiently close to the control panel or the remote control to quickly terminate exposure if something unpredictable occurs;
	* the radiation rate is limited to such a low level that it is suitable for an area where industrial radiography is being performed;
	* functioning of warning devices and safety systems are checked each day before starting to perform industrial radiography;
	* If warning devices or safety systems do not function correctly, the work cannot commence until the error is repaired.
2. If the industrial radiography in the field is performed with an X-ray device, it shall be necessary to ensure that:
* lights warning of radiation during its operation are installed on the X-ray device;
* the radiation beam emitting the radiation source is narrow and directed and a protective cover behind an image receiver is fitted if possible;
* the length of the cable between the control panel and the X-ray device is such that the dose rate on the control panel is lower than the values set out in the third indent of the preceding paragraph.

# Article 39

**(Checking the protected position)**

If industrial radiography is performed with a device which contains a sealed radiation source, checking with a radiation measuring devices shall be done after checking that the radiation source has returned to a protected position.

# Article 40(Containers)

1. A container in which a radiation source for industrial radiography is being transported shall comply with requirements for the transport of a container in accordance with regulations governing the transport of hazardous goods and requirements in the ISO standard for performing industrial radiography, and shall be designed so that the radiation source is moved from its storage position by remote control only.
2. The container shall have a locking device that can be locked without a key and opened only with a key. Locking when the radiation source is not in a protected position shall be prevented. The locking device shall be clearly marked, showing whether the container is locked or not.
3. The container shall be marked by a symbol warning of radiation danger under Article [13](#_bookmark3) of these Rules. The type of radionuclide, maximum activity for which the container is designed, initial activity and the start date of activity, the type of container and the date of the last inspection of the device shall be appropriately marked.
4. Dose rates on surface areas of a container in which a radiation source is placed cannot exceed 2 mGy/h or 0,02 mGy/h35 at a distance of 1 m from the container.

# PROTECTING RADIOACTIVE RADIATION SOURCES

**Article 41**

**(Entities obligated for radiation measures)**

1. For radiation sources of category 1, as set out in a regulation governing radiation activities, physical protection measures shall be implemented according to the regulation governing the physical protection of nuclear facilities, nuclear and radioactive substances and the transport of nuclear substances.
2. The protection of radiation sources shall be carried out for hazardous radiation sources of category 2 and 3 as set out in the regulation governing radiation activities.
3. A tiered approach in the management of radiation sources shall be applied in accordance with Article [42](#_bookmark7) of these Rules to radioactive radiation sources which are not a hazardous radiation source and to radiation sources which are a radiation substance with a mass lower than that prescribed for category III in the regulation governing the physical protection of nuclear facilities, nuclear and radioactive substances, and to the transport of nuclear substances.

# Article 42

**(Foundations for protecting radioactive radiation sources)**

1. A user of a radiation source shall, by considering the level and magnitude of risk as far as is reasonably possible, prevent:
	* unauthorised access to a radiation source;
	* prohibited removal of a radiation source;
	* loss or theft of a radiation source.
2. A user of a radiation source shall ensure that:
	* sufficient human, financial and technical resources are available to contribute to the performance of continuous tasks and protective measures, considering potential risks;
	* periodic maintenance and inspections of protective systems are carried out;
	* procedures for acting in a case of safety situations are designed and applied;
	* it has in place a system for applying good practices and lessons from past experiences;
	* unauthorised access to a radiation source, its loss or theft, is detected within the shortest time possible;
	* it has a fast alarm service enabling action emergency safety situations;
	* it safely stores documentation on radiation sources, which is not made public according to Article [50](#_bookmark12) of these Rules;
	* it regularly checks its measures on the protection of radiation sources and upgrades them in case risks increase for situations under paragraph 1 of this Article.

# Article 43

**(Protective measures for radioactive radiation sources of category 2 and 3)**

1. Radiation sources of category 2 and 3, as set out in the regulation governing radiation protection, may be used or stored in areas with at least one technical obstacle. Technical obstacles may be different such as storing the radiation source in a locked area, affixing the radiation source into a solid base in an area where it is installed, placing a metal protection and a lock around the radiation source.
2. In areas where radiation sources of category 2 are used and stored, the system for detecting prohibited entry into an area with the radiation source, allowing for immediate action to be taken, shall be installed. The alarm display must be such that the location where the alarm was activated can be determined when the area is large.
3. A user of a radiation source, using portable and movable radiation sources of category 2 and 3, shall ensure that there are at least two independent physical obstacles acting as visual barriers and protecting the portable and movable radiation source against prohibited removal, when the radiation source is not under the physical control of the user. Independent physical control shall perform the function of deterring and restraining potential perpetrators from prohibited behaviours.
4. Visitors and other people coming close to a radiation source of category 2 and 3 shall be notified of protective measures being performed.
5. Radiation sources of category 2 and 3 shall be inspected at least once per week in terms of their protection.
6. A user of a radiation source shall ensure that protective measures for radiation sources are performed in such a way that they do not reduce radiation protection, and act in an emergency.
7. Protective measures during the transport of radiation sources categorised as hazardous goods with potential serious consequences by regulations governing the transport of hazardous goods shall be performed according to those regulations.

# Article 44

**(Description of protective measures for radiation sources in an assessment of radiation protection)**

A summary of protective measures for radiation sources shall be written in a special chapter in the assessment of radiation protection whose content is described in the regulation governing the conditions and methodology for assessing doses for the protection of workers and the population against ionising radiation.

# Article 45

**(Instructions for performing protective measures for radiation sources)**

To perform protective measures for radiation sources, written instructions shall be drawn up which shall include measures in a case of a known threat, including informing competent services and providing the list of telephone numbers to call.

# REGISTERS

**Article 46**

**(Register of radiation activity)**

The register of radiation activities shall at least maintain the following information from documents:

* an organisation and place of establishment of a legal entity or personal name and address of a physical person carrying out a radiation activity;
* the date of the notification of intention to carry out a radiation activity;
* the description of a radiation activity;
* conditions for carrying out a radiation activity;
* the name of the person responsible for radiation protection;
* information on people participating in performing a radiation activity;
* information on the assessment of radiation protection;
* the start and end date of carrying out the radiation activity and the reasons for ceasing to carry out the radiation activity;
* information on the licence to carry out the radiation activity or the registration of the radiation activity.

# Article 47

**(Register of radiation sources)**

The register of radiation sources shall at least maintain the following information from documents:

* a name and place of establishment of a user of a radiation source;
* information on a holder of a radiation source where it is not the same as in the preceding indent;
* information on a licence to carry out radiation activity or a registration of a radiation activity, a licence for the use of a radiation source and an extract from the register of radiation sources;
* information on the type of radiation source;
* the location where a radiation source is to be used and stored;
* the register code of a radiation source given by the authority competent for keeping the register;
* information on the start and end of use of a radiation source;
* in case of a radioactive substance: the date of handing over a radiation source to a provider of the mandatory public utility service for the management of radioactive waste, its return to a producer, its transfer to another provider of a radiation activity or other handing over after ceasing to use it;
* the date of last inspection and validity of the inspection and measurements of an authorised provider of radiation activity under Article 53 of these Rules.

# Article 48(Register of facilities)

The register of radiation, nuclear and less important radiation activities and sealed repositories (hereinafter: the register of facilities) shall keep the following information arising from documents:

* an organisation and place of establishment, or name and address of a provider of a radiation activity or an operator of a facility;
* the name of a legal representative;
* the description of a nuclear or radiation activity in a facility;
* the purpose and size of a facility, including its location;
* conditions for carrying out a radiation activity;
* the number and date of issued administrative acts that refer to a facility, from its spatial planning to completing its decommissioning;
* information on workers in an organisational unit for radiation protection.

# Article 49

**(Information on the sealed repository)**

The register of the facility for sealed repositories, which is a national infrastructural facility, shall maintain at least the following information from documents:

* information on a provider of a long-term control and maintenance of a facility;
* the description of the type of facility and its purpose of use;
* the type of disposed radioactive substances, the prevailing radionuclide and its quantity;
* information on the anticipated period of long-term control and maintenance;
* information on the content of long-term control and maintenance of a facility;
* information on the safety report for the period after closure and on works to be carried out;
* a graphical presentation of an area of the national infrastructural facility, with coordinates;
* the number and date of issued administrative acts that refer to a facility.

# Article 50

**(Information on radiation sources which are not public)**

1. Information in the register of radiation activities and in the register of radiation sources that describes and identifies the location of use and the location for storing high-activity radiation sources, shall not be made public.
2. Personal information about occupationally exposed workers, working under surveillance and handling radiation sources which are kept in the register of radiation activities or in the register of radiation, nuclear and less important radiation facilities and sealed repositories, shall not be made public.

# Article 51

**(Method of managing records)**

1. The competent authority maintaining a register shall ensure entries in the register are regularly updated and safety copies made.
2. Information shall be entered in a register only by an authorised person from the competent administrative authority that maintains the register.

# SUPERVISION OF THE IMPLEMENTATION OF RADIATION PROTECTION

**Article 52**

**(Obligations of a user of a radiation source)**

A user of a radiation source shall ensure:

* + regular inspection and maintenance of radiation sources and the correct operation of a radiation source;
	+ inspection and measurements of the radiation source under Article [53](#_bookmark13) of these Rules;
	+ appropriate management of a radiation source after ceasing its use, in accordance with Article [10](#_bookmark2) of these Rules;
* regular inspection of safety and warning systems;
* regular inspection and checking of properties and the protection of radiation sources.

# Article 53

**(Inspection and measurements of radioactive sources)**

1. Inspection and measurements shall be conducted by an authorised radiation protection expert holding an authorisation for their performance, before starting to use a radiation source and at regular intervals:

# every three years for:

* + - ionising fire detectors;
		- sealed radiation sources which contain radionuclides H-3 in gaseous state;
		- sealed radiation sources whose activity or specific activity does not exceed 10 times the exemption level for the activity or specific activity;
		- a cathode-ray tube intended for the display of visual images or other electrical apparatus operating at a voltage lower than 30 kV which is not type-approved and which, during normal operation, the dose rate at 10 cm from any accessible surface area of the device does not exceed 1 µGy/h;

# once per year:

* + - a cathode-ray tube intended for the display of visual images, or other electrical apparatus operating at a voltage higher than 30 kV which is not type-approved under the law governing ionising radiation protection and nuclear safety;
		- sealed radiation sources whose activity or specific activity exceeds 10 times the exemption level for the activity or specific activity;
		- empty containers constructed from depleted uranium;
		- open radiation sources of class III;
		- radiological equipment;

# every six months:

* + - radiation sources which with their own properties determine if a facility is a radiation or as a less important radiation facility;
		- X-ray devices used for screening programmes in biomedical and medical research.
1. Inspecting and measuring radiation sources of X-ray devices shall be required after each replacement of an X-ray tube except for X-ray devices made by manufacturers that in technical documentation specified the routine replacement of tubes by users.
2. For sealed radiation sources containing radionuclides H-3 in gaseous state, an authorised radiation protection expert shall check only the inventory of these sources, their physical state and technical flawlessness during inspections and measurements under paragraph 1 of this Article.
3. A report on inspections and measurements conducted before they are used under paragraph 1 of this Article may be substituted by a certificate of equivalent inspection from a producer or a certificate from a producer on which the assessment of radiation protection shows that the circumstances of using the radiation source do not depend on its installation and damage to the radiation source cannot occur during its transport.
4. Periodic inspection and measurements of open radiation sources shall be substituted by measurements in monitored and controlled areas in accordance with the regulation governing the obligations of a provider of a radiation activity and a holder of an ionising radiation source.
5. Aside from a radiation source, the condition of a container or the device containing a radiation source shall be checked during inspection and measurements.
6. Where inspection and measurements concern radiation sources used in radiological medical interventions, the inspection shall also include a review of the quality check programme to be carried out by the user of the radiation source. This should be part of an approved radiological intervention programme.
7. The review of the quality check programme referred to in the preceding paragraph shall be carried out by an independent authorised medical physics expert who shall check whether:
	* the quality check programme is adapted to the type and purpose of the radiological equipment and considers current EU recommendations;
	* the radiological equipment complies with acceptability criteria stated in the programme;
	* the parameters measured are within permitted discrepancies from optimal values stated in the programme; and
	* individual tests are conducted with the frequency stated in the programme.
8. If inspection and measurements concern sealed radiation sources used for industrial radiography, the authorised radiation protection expert shall, in addition to parameters allowing for the assessment of received doses, check that:
* the cable is not corroded or damaged;
* there are no loops or knots in the cable;
* the joint between the cable and the fitted radiation source is not damaged;
* the markings on a container;
* the container is not damaged;
* the connection with the cable is clean and not damaged;
* the shutters work correctly;
* the leaking of a sealed radiation source;
* the warning lights;
* the radiation measuring devices used by a provider of industrial radiography.
1. Aside from inspection of the authorised radiation protection expert under paragraph 1 of this Article, radiation sources shall also be inspected in accordance with the producer’s instructions for operating and supervising, in time periods specified by the producer in the technical documentation for the radiation source.
2. The authorised provider of radiation protection shall prepare a report on inspections and measurements of radiation sources and send it to the competent administrative authority. Conclusions in the report on inspection and measurements of radiation sources shall state whether the radiation sources and areas where they are used and stored comply with the acceptability criteria for their use and storage. If they do not comply with the acceptability criteria, corrective measures shall be proposed.
3. If inspection and measurements concern radiation sources for which measures for protecting radiation sources are required, the inspection of radiation sources shall also include the inspection of protective measures from the Radiation protection assessment, which is specified in the regulation governing the content of the radiation protection assessment and in Article 42 to 44 of these Rules.

**Article 54**

**(Participation of an authorized radiation protection expert in the implementation of radiation protection in the nuclear and radiation facility)**

1. The operation of the organizational unit of radiation protection in a nuclear or radiation facility must be consulted at least once a year by an authorized radiation protection expert, who shall prepare a report on radiation protection.
2. For all overhauls and individual works in a controlled area of a nuclear or radiation facility for which a planned collective dose of more than 0,1 is a man Gy or the planned individual dose of a worker is greater than 10 mGy, the implementation of radiation protection must be accompanied by an authorized radiation protection expert.
3. The number of authorized radiation protection experts monitoring the implementation of radiation protection shall be determined by the competent authority according to the extent and complexity of the work being carried out.

# TRANSITIONAL AND FINAL PROVISIONS

**Article 55**

**(Validity of existing inspections and measurements of radiation sources)**

On the day that these Rules enter into force all radiation sources shall have undergone valid inspection and measurements under Article [53](#_bookmark13) of these Rules. Their validity shall not be longer than the validity laid down for these radiation sources by these Rules.

# Article 56(End of validity)

On the day, these Rules enter into force the Rules on the use of radiation sources and on activities involving radiation (Official Gazette of the RS, No. 27/06) shall cease to have effect.

# Article 57

**(Start of validity and deferred use of certain provisions of these Rules)**

1. This Decree shall enter into force on the fifteenth day after its publication in the Official Gazette of the Republic of Slovenia.
2. Provisions of chapter V of these Rules on the protection of radiation sources shall apply from 30 June 2019.
3. The eighth paragraph of Article 13 of these Rules shall apply from 1 January 2019.

Number 007-356/2017

Ljubljana, 19th March 2018
EVA 2016-2550-0071

Milojka Kolar Celarc Minister of Health

Irena Majcen

Minister of the Environment and Spatial Planning

# ANNEX 1

**Warning markings for radiation hazard**

* 1. **Basic symbol**



1. Radius of the central circle
2. 1.5 times radius of the central circle 3- 5 times radius of the central circle

# Warning marking for radiation hazard



* 1. **Marking for hazardous sources of category 1 to 3 which must be fitted on the internal side of a container containing a radiation source and must not be visible during its normal use.38**



38 ISO 21482:2007 specifies the symbol to warn of the presence of a dangerous level of ionizing radiation from a high-level sealed radioactive source that can cause death or serious injury if handled carelessly. This symbol is not intended to replace the basic ionizing radiation symbol (ISO 361), but to supplement it by providing further information on the danger associated with the source and the necessity for untrained or uninformed members of the public to stay away from it.

This symbol is recommended for use with International Atomic Energy Agency (IAEA) Category 1, 2, and 3 sealed radioactive sources. These sources are defined by the IAEA as having the ability to cause death or serious injuries.

# ANNEX 2

**Requirements for X-ray devices for industrial radiography** **Table 1: Leaking of X-ray device housing**

|  |  |
| --- | --- |
| **Voltage in pipes (kV)** | **Leaking at a distance of 1 m (mGy/h)** |
| Up to 150 | 1 |
| 150-200 | 2.5 |
| Above 200 | 5 |

**Table 2: Total filtration of a beneficial beam of radiation**

|  |  |
| --- | --- |
| **Voltage in pipes (kV)** | **Total filtration** |
| Up to 50 | No requirements |
| 51–99 | 2 mm Al |
| 100-199 | 3 mm Al |
| 200-300 | 4 mm Al |
| Above 300 | 0.5 mm Cu |

Rules on the use of radiation sources and on activities involving radiation (JV2/SV2)

# ANNEX 3

**STANDARDISED RECORD SHEET FOR HIGH-ACTIVITY SEALED SOURCES (HASS) (text in italic is not mandatory)**

|  |  |  |
| --- | --- | --- |
| **1. HASS identification number:** | **2. Licence holder code:** | 3. **HASS location** (use or storage) when not the same as in column 2. |
| Name: | Name: |
| Number of device producer: | Address: | Address: |
| Field of use: | Country: | Country: |
|  | Producer □ Supplier □User □ | Stationary use □ Storage □Portable use □ |
| **4. Taking records** | **5. Licence** | **6. Surveillance over HASS operation** |
| Start date of taking records: | Number: | Date: |
| Date of transferring records into archive: | Date of issue: | Date: |
| Date of expiry: | Date: |
| **7. Properties** | **8. HASS receipt:** | Date: |
| *Year of production:* |  | Date: |
| Radionuclide: | Date of receipt: | Date: |
| Activity on the date of production: | Received from | Date: |
|  | Date: |
| Reference date of activity: | Name: | Date: |
| Producer/Supplier: (\*) | Address: | Date: |
| Name: | Country: | Date: |
| Address: | Producer □ | Supplier □ | Other user □ | Date: |
| Country: | **9. HASS transfer** | **10. Additional information** |
| Physical and chemical properties | Date of transfer: | Loss □ | Date of loss: |
|  | Transfer to | Theft □ | Date of theft: |
| *Marking of radiation source:* | Name: | *Found:* | Yes □ *No* □ |
| *Marking capsule:* | Address: | *Date:* |
| *Classification under ISO:* | Country: | *Location:* |
| *Classification under ANSI:* | Licence number: | *Other information:* |
| *Category of MAAE source:* | Date of issue: |
| *Neuron origin:* | Yes □ | *No* □ | Date of expiry: |
| *Target of neutron origin:* | Producer □ Supplier □Other user □ |
| *Neutron flux:* | Facility for long-term storage or disposal □ |

(\*)If the producer of a radiation source has a place of establishment outside the European Union, list the name and address of the importer or supplier instead of its name and address.